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In the Claims:

1-20. (Canceled)

- 21. (Currently Amended) The method of claim 50, wherein the sequence of F₁ corresponds to a segment sequence of amino acid residues from present within N-terminal residues 1-10 of SCF (SEQ ID NO:1)[[,]]; F₂ corresponds to a segment sequence of amino acid residues from present within residues 79-95 of SCF, and the sequence of F₃ corresponds to a segment sequence of amino acid residues located present within three amino acid residues of amino acid residue 127 of SCF[[,]]; and where, in X_B, X_m, and X_P respectively, wherein n=0-5, m=0-5 and p=3-8 amino acid residues.
- 22. (Currently Amended) The method of claim 50, wherein each of F_1 , F_2 , and F_3 have has been selected by bacterial phage display for optimal receptor binding.

23-25. (Canceled)

- 26. (Currently Amended) The method of claim 50, wherein the organic polymer is polyethyleneglycol (PEG) comprising the structure H[OCH₂CH₂]_nOH, wherein n is an integer from 10[[-]] to 20.
- 27. (Previously Presented) The method of claim 50, wherein the capping moiety is a thiol-reactive group.

28-47. (Canceled)

48. (Currently Amended) A method for designing of preparing a

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compound capable of binding to a Stem Cell Factor-binding site of a Kit receptor Stem Cell Factor receptor comprising the steps of:

- a) determining the 3-D structure of a fragment of a Stem Cell Factor (SCF) by computing atomic coordinates from X-ray diffraction data of a crystal of the fragment of SCF, wherein the fragment of SCF consists of consecutive amino acids the sequence of which is set forth in SEQ ID NO:1;
- b) determining a Kit receptor identifying a Stem Cell Factor receptor-binding site on the fragment of SCF based on the 3-D structure of the SCF fragment; and
- c) and designing a compound capable of binding to the Stem Cell Factor-binding site of the Stem Cell Factor receptor of the Kit receptor based on a 3-D structure shape complementarity or estimated interaction energy of the Stem Cell Factor receptor-binding site on the fragment of SCF; and
- d) preparing the compound capable of binding to the Stem Cell Factor-binding site of the Stem Cell Factor receptor designed in step (c).
- 49. (Canceled)
- 50. (Currently Amended) The method of claim 48, wherein the designed compound capable of binding to a Kit Stem Cell Factor receptor comprises two ligand heads linked by a linker molecule, wherein the linker molecule is an organic polymer attached at each end to a separate capping moiety,

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each capping moiety attached in turn to a single ligand head via a cysteine residue, wherein the ligand head comprises the elements F_1 - X_n - F_L (Cys)- X_m - F_2 - X_p - F_3 , wherein each of F_1 , F_2 and F_3 are is a peptide peptides each comprising consecutive amino acid sequences acids having a sequence corresponding to a sequence of consecutive amino acid residues of Stem Cell Factor (SCF) (SEQ ID NO:1)[[,]]; each of X_n , X_m , and X_p are is a peptide peptides of n, m, and p amino acid residues, respectively where each of n, m, and p is an integer representing a number of amino acid residues[[,]]; F_L (Cys) is the cysteine residue; and each dash (-) represents element is linked to the next via a peptide bond.

51. (Previously Presented) The method of claim 27, wherein the thiol-reactive group is N-ethyl malemide.